

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-73. (canceled)

74. (currently amended) An electrical connector for power applications, the connector comprising:

a) an insulative housing;

b) ~~a plurality of cavities~~ cavity disposed in said insulative housing, ~~the cavity defined by a series of housing walls~~ a first wall and two spaced apart housing walls that each extend from the first wall; and

c) a power contact disposed in ~~each one of said plurality of cavities~~ said cavity, said power contact comprising: a pair of opposed contact walls defined by a first planar panel, a second planar panel, a medial space between the first planar panel and the second planar panel; ~~[[,]]~~ a first flexible compressible beam adjoining that adjoins the first planar panel and extends in a direction generally parallel to one of said two spaced apart housing walls; ~~[[,]]~~ a second flexible compressible beam adjoining that adjoins the second planar panel and extends in a direction generally parallel to one of said two spaced apart housing walls; ~~[[,]]~~ and separated contact terminals that extend from the first planar panel and the second planar panel in a direction perpendicular to the first flexible compressible beam and the second flexible compressible beam and generally parallel to one of said two spaced apart housing walls, ~~the first and second flexible beams defining a heat flow path therebetween;~~

~~wherein heat dissipation can occur from the heat flow path defined between the first flexible beam and the second flexible beam; and~~

wherein at least one of the first planar panel and the second planar panel is spaced from an adjacent one of said housing walls such that heat dissipation can also occur from an exterior ~~contact~~ surface of the power contact.

75-78. (canceled)

79. (withdrawn) The housing of claim 74, wherein the two spaced apart contact walls face each other.

80. (withdrawn) An electrical connector, comprising:

a) a housing, comprising:

i) a contact receiving cavity; and

ii) a top wall including a heat dissipation through-hole formed therein that is fluidly connected to said contact receiving cavity; and

b) an electrically conductive contact positioned in said contact receiving cavity, said electrically conductive contact comprising a first contact wall, a second contact wall opposing said first contact wall, and a medial space between said first and second contact walls, a first flexible beam adjoining a forward edge the first contact wall, and a second flexible beam adjoining a forward edge of the second contact wall, the first and second flexible beams each having a width, the first and second flexible beams defining a heat flow path therebetween, the heat flow path being unobstructed in a widthwise direction of the first and second flexible beams, wherein at least a portion of said first and second contact walls are positioned in the housing below said heat dissipation through-hole.

81. (currently amended) The electrical connector of claim [[80]] 74, wherein at least one of said first and second ~~contact walls~~ planar panels is spaced away from the adjacent housing wall structure bounding said contact receiving cavity such that a heat dissipation channel is formed between ~~said at least one of said first and second contact walls and said adjacent housing structure~~ an adjacent one of said two spaced apart housing walls and one of the first and second planar panels.

82. (withdrawn) The electrical connector of claim 81, wherein said heat dissipation channel is fluidly connected to said heat dissipation through-hole.

83. (currently amended) The electrical connector of claim [[80]] 74, ~~wherein at least one of said first and second contact walls includes~~ further comprising a lateral positioning

element for spacing ~~it from a cavity wall of said contact receiving cavity~~ one of the first and second planar panels from one of the of the two spaced apart housing walls.

84. (currently amended) The electrical connector of claim [[80]] 83, wherein said ~~contact receiving cavity includes a cavity wall having a~~ lateral positioning element ~~for spacing one of said first and second contact walls from said cavity wall~~ extends from one of said two spaced apart walls.

85. (previously presented) A connector system, comprising:

(A) a connector, comprising:

a) an insulative housing;

b) a plurality of cavities disposed in said insulative housing defined by a series of housing walls; and

c) a power contact disposed in each one of said plurality of cavities, said power contact comprising a pair of opposed contact walls defined by a first planar panel, a second planar panel, a medial space between the first planar panel and the second planar panel, a first flexible beam extending from the first planar panel, and a second flexible beam extending from the second planar panel;

wherein heat dissipation can occur from interior contact surfaces by passage of air in the medial space; and

wherein at least one of the first planar panel and the second planar panel is spaced from an adjacent housing wall such that heat dissipation can also occur from an exterior contact surface; and

(B) a mating connector, comprising:

a) an insulative housing;

b) a plurality of cavities disposed in said insulative housing of the mating connector, the cavities being defined by a series of housing walls; and

c) a plurality of receptacle contacts for receiving the first and second flexible beams of respective ones of the power contacts, each of the receptacle contacts being disposed in a respective one of said plurality of cavities disposed in said insulative housing of the mating connector, each of said receptacle contacts comprising a pair of opposed contact

walls defined by a first planar panel, a second planar panel, and a medial space between the first planar panel and the second planar panel of the receptacle contact;

wherein heat dissipation can occur from interior contact surfaces of the receptacle contacts by passage of air in the medial spaces of the receptacle contacts; and

wherein at least one of the first planar panel and the second planar panel of each of the receptacle contacts is spaced from an adjacent housing wall of the mating connector such that heat dissipation can also occur from an exterior contact surface of the receptacle contact.

86. (withdrawn) A connector system, comprising:

(A) a connector, comprising:

a) a housing, comprising:

i) a contact receiving cavity; and

ii) a top wall including a heat dissipation through-hole formed therein

that is fluidly connected to said contact receiving cavity; and

b) an electrically conductive contact positioned in said contact receiving cavity, said electrically conductive contact comprising a first contact wall, a second contact wall opposing said first contact wall, a medial space between said first and second contact walls, a first flexible beam adjoining the first contact wall, and a second flexible beam adjoining the second contact wall, wherein at least a portion of said first and second contact walls are positioned in the housing below said heat dissipation through-hole; and

(B) a mating connector, comprising:

a) a housing, comprising:

i) a contact receiving cavity; and

ii) a top wall including a heat dissipation through-hole formed therein

that is fluidly connected to said contact receiving cavity of the mating connector; and

b) a receptacle contact for receiving the first and second flexible beams, the receptacle contact being positioned in said contact receiving cavity of the mating connector, said receptacle contact comprising a first contact wall, a second contact wall opposing said first contact wall of the receptacle contact, and a medial space between said first and second contact walls of the receptacle contact, wherein at least a portion of said first

DOCKET NO.: FCI-2701/4524B(C7123B)

PATENT

Application No.: 09/886,550

Office Action Dated: October 26, 2005

and second contact walls of the receptacle contact are positioned in the housing of the mating connector below said heat dissipation through-hole of the housing of the mating connector.